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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,430	04/03/2001	Tadashi Takano	SIMTEK6140	4775

25776 7590 03/06/2006

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EXAMINER
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TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/681,430

Applicant(s)

TAKANO, TADASHI

Examiner

Tamai I.E. Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/08/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 29-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. In view of the Appeal Brief filed on 12/087/2005, PROSECUTION IS HEREBY REOPENED. The non-final rejection of the amended claimed filed on 12/04/2004 is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

  
DARREN SCHUBERG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

2. The indicated allowability of claims 1-16 is withdrawn in view of the newly discovered references. Rejections based on the newly cited references follow.

### ***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on April 20, 2000. While the prior examiner indicated that the

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certified copy of the parent foreign application had been filed, the certified copy of the parent is not in the file wrapper nor does any submission by the applicant indicate that the certified copy of the parent was ever filed for JP 2000-108258, as required by 35 U.S.C. 119(b).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bunch (US 3752603). Bunch teaches a brushless, DC motor 14 with a cylindrical outer housing 12 having a cylindrical outer housing with two end walls (see figure 2), where the first end wall 18 is abuts and detaches from the cylindrical section 12, and has the rotor shaft extending therethrough and a cylindrical portion extending away from the motor which forms a cavity for the pump 16. Bunch teaches the second end wall integrally formed with the cylindrical center section.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603), in further view of Takemoto et al. (Takemoto)(US 6082974). Bunch teaches every aspect of the invention except a pump having a lid (third end closure) for closing the cavity, the first end closure axially spaced from the cylindrical center section. Takemoto teaches a lid 12 (third end closure) for containing the pump in the cavity. Takemoto teaches the first end closure 7b spaced from the center cylindrical section 7a which supported the stator core (shown in the drawings as an exposed laminated core) and field coil 5a. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch with the third end wall being affixed to close the cavity because Takemoto teaches the fixed lid 12 because the size and weight of the motor can be reduce by forming the pump chamber in the endwall of the motor and the affixed lid 12.

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Takemoto et al. (Takemoto)(US 6082974), in further view of Molnar (US 5877574). Bunch and Takemoto teach every aspect of the invention except the motor having a plurality of field coils. Molnar teaches permanent magnet motors are driven by hall sensors mounted within the housing for electrically commutating the plurality of stator windings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch and Takemoto with the stator winding being a plurality of windings controlled by a hall sensor to provide good control of the motor and is easily manufactured, as taught by Molnar.

9. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603), in further view of Molnar (US 5877574). Bunch teaches every aspect of the invention except the motor having a plurality of field coils controlled by hall sensors in the motor housing. Molnar teaches permanent magnet motors are driven by hall sensors mounted within the housing for electrically commutating the plurality of stator windings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch with the stator winding being a plurality of windings controlled by a hall sensor to provide good control of the motor and is easily manufactured, as taught by Molnar.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Molnar (US 5877574), in further view of Takemoto et al. (Takemoto)(US 6082974). Bunch and Molnar teach every aspect of the invention except the controller mounted external to the housing. Takemoto teaches the controller mounted exterior to the housing to facilitate cooling. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch and Molnar with the controller external to the housing to facilitate cooling, as taught by Takemoto.

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11. Claims 17-19, 21, 25, 27, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603), in further view of Sakuma (JP 5-292729). Bunch teaches every aspect of the invention except the cylindrical post extending into the rotor with anti friction bearing on the post and a bearing on the first end wall. Sakuma teaches bearings on the first end wall and cylindrical post which is integrally formed with the second endwall. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch with the bearing support of Sakuma to provide excellent vibration resistance.

12. Claims 20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Sakuma (JP 5-292729), in further view of Strobl (US 5899572). Bunch and Sakuma teach every aspect of the invention except oil impregnated sleeve bearings. Strobl teaches that oil impregnated sintered bronze sleeve are inexpensive alternatives to ball bearings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch and Sakuma with oil impregnated sleeve bearings to provide a less expensive motor.

13. Claims 22, 24, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Sakuma (JP 5-292729), in further view of Buchanan, Jr. (US 5644180). Bunch and Sakuma teach every aspect of the invention except cylindrical post being detachable. Buchanan teaches the detachable post 52A

provides self alignment. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch and Sakuma with detachable post of Buchanan to provide a self aligning rotor.

14. Claims 23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Sakuma (JP 5-292729), in further view of Buchanan, Jr. (US 5644180) and Strobl (US 5899572). Bunch, Sakuma, and Buchanan teach every aspect of the invention except bearing being oil impregnated. Buchanan teaches the bearing is self lubricating, which suggests oil impregnated. Strobl teaches that oil impregnated sintered bronze sleeve are inexpensive alternatives to ball bearings. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch, Sakuma, and Buchanan with oil impregnated sleeve bearings to provide a less expensive motor.

15. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bunch (US 3752603) and Robertson et al. (Robertson)(US 6132184). Bunch teaches every aspect of the invention except the use in combination with a power steering booster. controller mounted external to the housing. Robertson teaches that DC motors are used as pumps in power steering devices. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Bunch as a pump for power steering devices to provide an integrated unit for power steering as taught by Robertson.



16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai  
PRIMARY PATENT EXAMINER  
March 1, 2006



KARL TAMAI  
PRIMARY EXAMINER

3752603  
6082974  
5877574  
6132184  
5644180  
5899572